

Galton guide the *Eugenics Society*. They are printed on the inside of the cover of our *Statement of Objects*.

The reader of Mr. Armstrong's book who visualises the road to happiness therein charted as a long and pitted road, with many windings, sharp turns, steep climbs and sharp descents, in short, as an arduous and difficult road which will take a suffering humanity many hundreds of years at least to travel, such a reader will find in the country finally reached at the journey's end much to stimulate and even inspire him. Posterity may well be as grateful to Mr. Armstrong for his testament as are his numerous pupils for the kindly and sympathetic guidance they have received from him during his life.

C. P. BLACKER.

## GENETICS

**Catcheside, D. G.** *The Genetics of Micro-Organisms*. London, 1951. Pitman. Pp. vii + 223. Price 21s.

ONLY a decade ago, the genetics of micro-organisms had scarcely been touched. Then, in 1941, the production of the first biochemical mutants in the bread mould *Neurospora* touched off a chain reaction of discoveries in various fields which has not yet come anywhere near its end. The analysis of biochemical mutants in moulds, in yeasts and in bacteria has opened up a field which is equally important for the understanding of primary gene action and for the elucidation of intermediate metabolism; in fact, we are now witnessing the coalescence between genetics and biochemistry which is scarcely less fundamental than that between genetics and cytology. The adaptive fermentation of yeasts, the genetics of antigenic differences and of the "killer" character in *Paramecium*, the acquisition of resistance to penicillin, to sulphonamides and to bacteriophages by bacteria, the antigenic transformations of *Pneumococci*, the sexual reproduction and crossing-over in bacteria, to mention only a few of the more important discoveries of the last few years, all these and other new facts have hardly started to find

their way into the text-books of genetics. Indeed, new discoveries are published at a rate which makes it very difficult for the non-specialist to keep pace with this breath-taking advance.

Under these circumstances, the publication of this authoritative, critical, clear and balanced account of the field as a whole was an urgent necessity not only for geneticists but also for biochemists, microbiologists and virologists. Complete with its classified bibliography of about 260 titles, this is a book of the utmost usefulness which will find a wide circulation.

H. GRÜNEBERG.

**Hallgren, Bertil.** *Specific Dyslexia ("Congenital Word-Blindness") ; A Clinical and Genetic Study*. Copenhagen, 1950. Ejnar Munksgaard. Pp. 287. *Acta Psychiatrica et Neurologica Supplementum* 65.

THE author set himself the following tasks : 1. To determine the existence of hereditary specific dyslexia. 2. In the event of the disability proving hereditary, to make a genetic statistical analysis and to determine the mode of inheritance. 3. To carry out a clinical analysis of the disability with special regard to certain physical, mental and environmental factors. The author's diagnostic criteria were : reading and writing difficulties ; a discrepancy between proficiency in these subjects and in other school subjects ; a discrepancy between writing and reading on the one hand, and the general intelligence on the other hand. The reading and writing tests used were not standardized. The diagnosis was not made on the basis of test results only. In a number of parents and older siblings of probands it was obvious to the author that specific dyslexia had become compensated. A positive history of reading and writing disability was taken as the most important diagnostic criterion. The author's material, which was derived from a child guidance clinic and a grammar school, consisted of 276 cases of specific dyslexia ; 116 probands and 160 secondary cases (siblings and parents of probands). In